

## ABSTRACT

Disclosed are systems and methods which provide for location positioning in wireless networks using techniques which are adapted to provide reliable location determinations even in complex topological environments. Embodiments utilize multiple antenna patterns, such as may be provided using phased array antennas, and implement location positioning techniques which do not require alteration of remote stations in providing location positioning. Various techniques for determining location may be implemented, including a channel model independent approach, a channel model based approach, or combinations thereof. A channel model independent approach used in providing location positioning may compare receive signal strength differences to an antenna gain difference table to determine an angle in the azimuth that a remote station is located. A channel model based approach used in providing location positioning may compare receive signal strength measurements to a database of signal strengths created using a wireless channel model.